

## CLAIMS

1. (Previously Amended) A transmitter Medium Access Control (MAC) layer, comprising:
  - a clock synchronization unit having a timing device with a clock speed;
  - at least one frequency divider coupled to said clock synchronization unit, said frequency divider configured to reduce said clock speed to generate a desired pulse repetition frequency;
  - at least one slot allocation unit coupled to said at least one frequency divider, the slot allocation unit capable of different repetition frequencies; and
  - a multiplexer operatively coupled to said at least one slot allocation unit, said multiplexer configured to merge a plurality of outgoing signals.
2. (cancelled)
3. (original) The transmitter MAC layer recited in claim 1, wherein each of said at least one slot allocation unit is configured to support different modulation techniques.
4. (original) The transmitter MAC layer recited in claim 1, wherein each of said at least one slot allocation unit is configured to support pulse amplitude modulation.
5. (original) The transmitter MAC layer recited in claim 1, where each of said at least one slot allocation unit is configured to support on-off keying.

6. (previously amended) An ultra wide band transmitter Medium Access Control (MAC) layer, comprising:

a clock synchronization unit;

at least one frequency divider communicating with the clock synchronization unit, the frequency divider structured to generate a pulse repetition frequency;

at least one slot allocation unit communicating with the at least one frequency divider, the slot allocation unit capable of different repetition frequencies; and

a multiplexer communicating with the at least one slot allocation unit, the multiplexer structured to merge a plurality of outgoing ultra wide band pulses.

7. (original) The ultra wide band transmitter Medium Access Control (MAC) layer of claim 6, wherein the clock synchronization unit further comprises a timing device with a clock speed.

8. (cancelled)

9. (original) The ultra wide band transmitter Medium Access Control (MAC) layer of claim 6, wherein each of the at least one slot allocation unit is configured to support different modulation techniques.

10. (original) The ultra wide band transmitter Medium Access Control (MAC) layer of claim 6, wherein each of the at least one slot allocation unit is configured to support on-off keying.

Claims 11-15 (cancelled)